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BLISTER RUST NEWS SERVICE.

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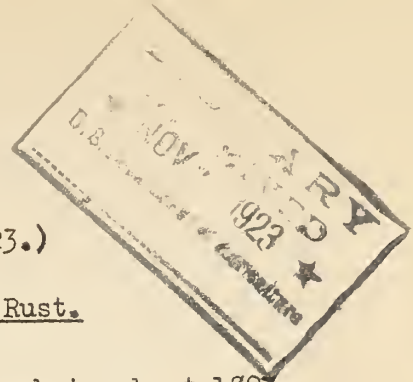
White Pine Can Be Protected from the Blister Rust.

At Kittery Point, Maine, the blister rust dates back to about 1897, coincident with the planting of some cultivated black currants which were brought into the locality from England. This infection area was not discovered until 1916. In 1917 all of the currants and gooseberries, the alternate host plants responsible for spreading blister rust on pines, on the area were removed to control the disease. At this same time an intensive study was made in a portion of the area which was most heavily infected.

On four quarter-acre plots at Kittery Point studied in 1917, of a total of 612 white pine trees, there were 363 or 59.3 percent infected. By 1921, only four years later, 204 of these infected trees, or 33 1/3 percent, were dead. The dead trees were between 10 and 20 years old. This loss is partly compensated for by 146 young pine which have sprung up from seed since 1917, none of which are infected.

Though the wild gooseberry and currant (*Ribes*) bushes averaged 15 per acre in 1917, not a single bush was found upon checking up the study plots in 1921. This shows that the destruction of currants and gooseberries was thorough, and as a result the blister rust was effectively controlled in this area. The young pine seedlings which have sprung up are healthy and will eventually take the place of the infected trees because protection was given them.

A second study of the effect of removing the currant and gooseberry bushes near white pines was made at Alfred, Maine, while the results se-



cured were contrasted with those at Springvale, Maine, only 5 miles distant, where no bushes were removed. Both areas are in the generally infected region of York County, Maine, while the types of timber and the kind of land are very similar. At Alfred, the study plots were made in young pine which averaged 2.9 feet in height, an examination being made of every tree in 10 plots, each plot being one rod wide and 4 rods long. On these plots where the Ribes bushes, which spread the rust, were destroyed in 1917, there were only 3 trees out of a total of 682 found infected 4 years later, in 1921; the percent of infection being about $1/25$ of 1%.

In contrast to the results secured at Alfred, let us examine the results secured by studying an equal area at Springvale. Here in 1921, 10 plots one rod wide and four rods long were laid out in an area of young pine where no protection from the blister rust had been given the pines. The average height of the trees was 2.1 feet. Of 480 trees found and examined in 1921, 272 or 57% were found infected; and on account of their small size their death was only a matter of a few years. Originally, the number of gooseberry and currant bushes in the two areas was approximately equal, though the bushes at Springvale were slightly larger.

A study of the three areas, Kittery Point, Alfred and Springvale, Maine indicates what may be expected if the white pines are not protected, as well as the fact that practical control measures do protect the pines.

